#6.00

OWNER'S MANUAL

SETTING UP INSTRUCTIONS
PARTS LIST

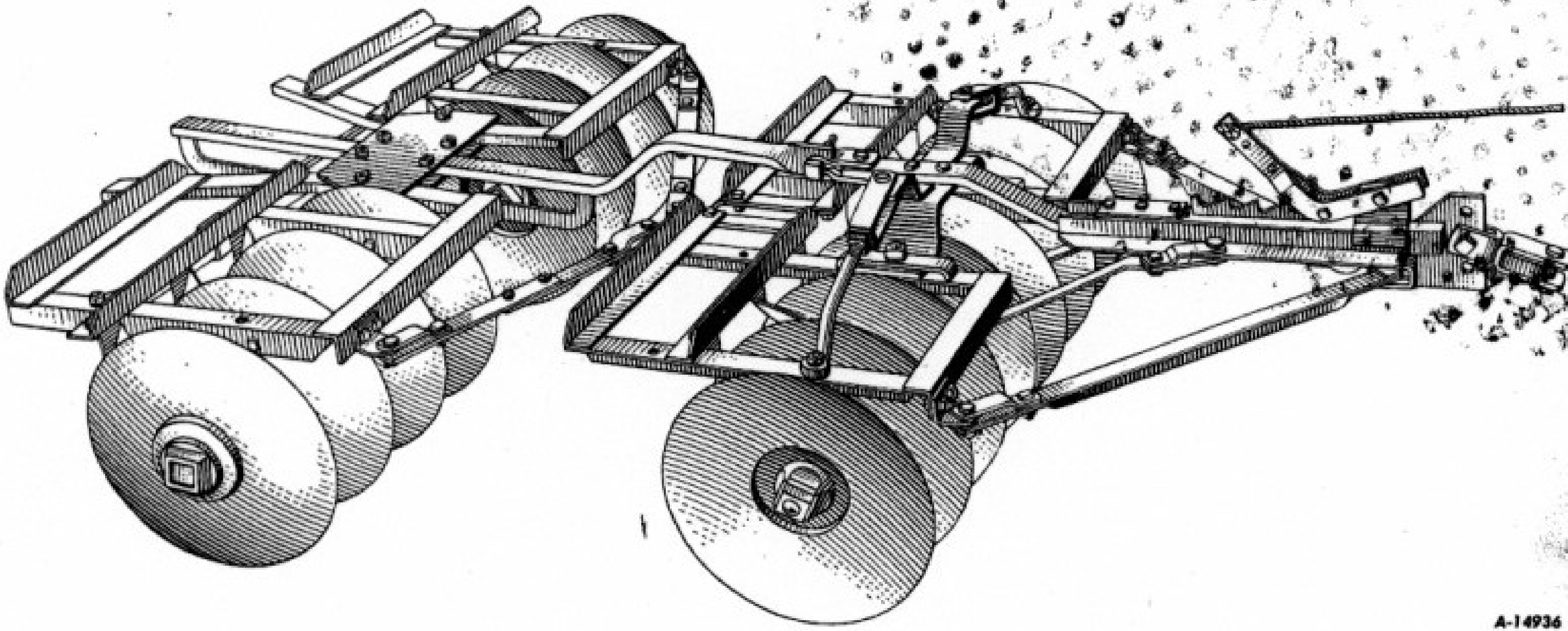
McCORMICK-DEERING

Tractor Disk Harrow
No. 23-A

(4 Ft. — 6⅝" Spacing)

This manual contains information which will be valuable to you during the entire life of your equipment. Rely on your manual for operating and maintenance information . . . and rely on your International Harvester dealer when in need of skilled mechanical service or IH parts.

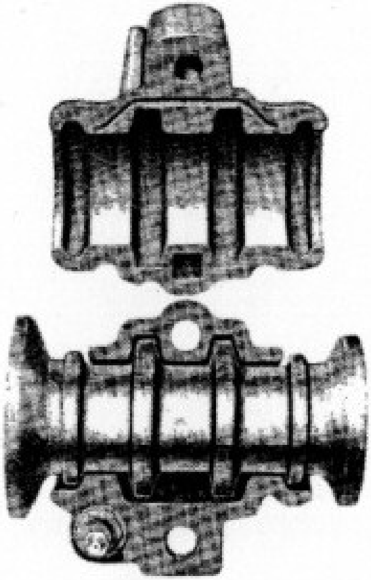
INTERNATIONAL HARVESTER COMPANY
180 NORTH MICHIGAN AVE. CHICAGO 1, ILLINOIS, U.S.A.



No. 23-A Tractor Disk Harrow.

INSTRUCTIONS FOR ADJUSTING AND OPERATING

(Setting Up Instructions are on page 6)

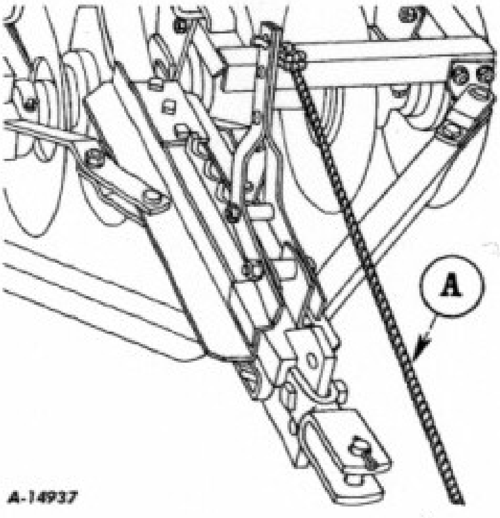


Illust. 1

LUBRICATION

The bearings on this machine are provided with large oil reservoirs and pressure gun fittings. Before operating, all bearings should be thoroughly lubricated.

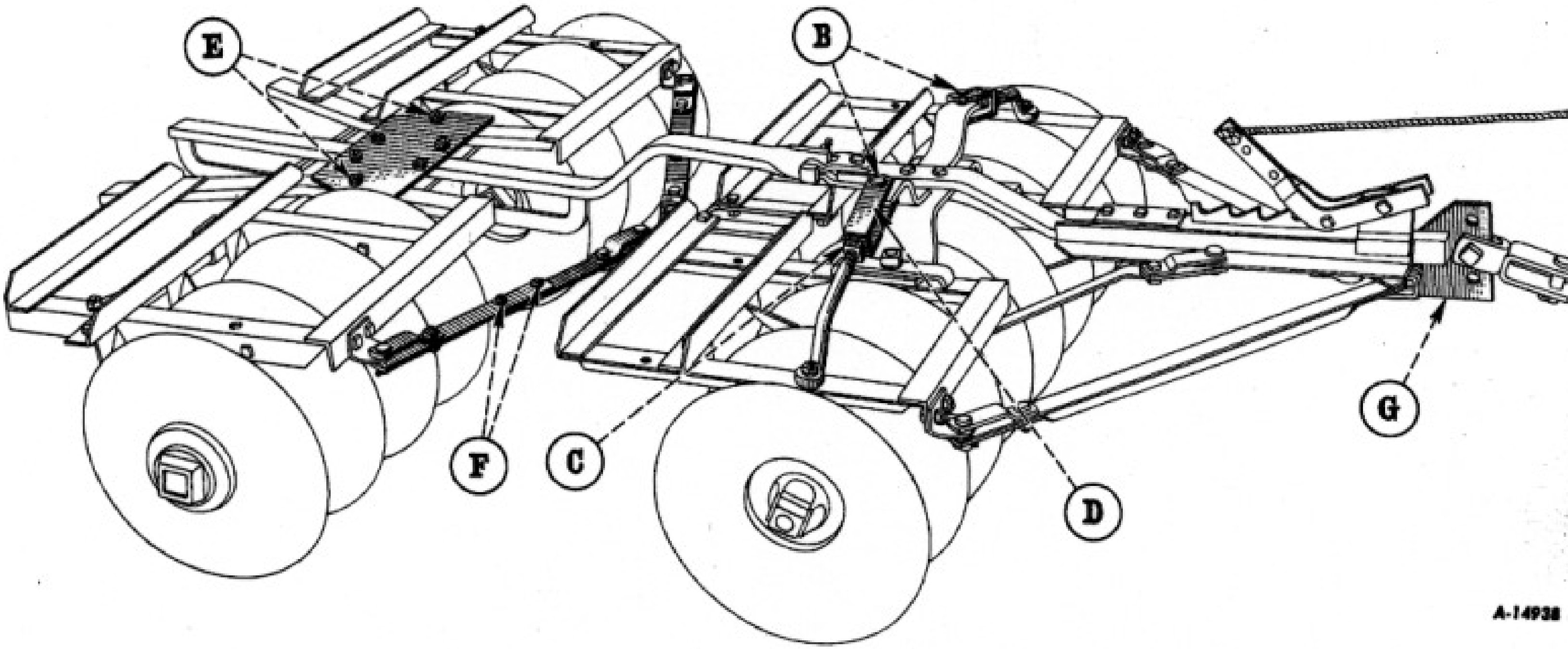
Fill the pressure gun with pressure gun lubricant and pump an ample supply into the bearings. Repeat this operation once daily.



Illust. 2

OPERATING

To angle the gangs, pull the adjusting rope "A" *(Illust. 2)* and move the tractor ahead until the desired working angle is obtained. To straighten the gangs, back the tractor.



Illust. 3

ADJUSTMENTS

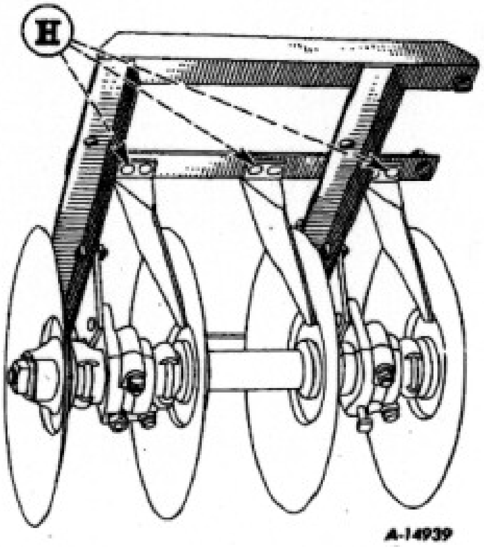
In practically all field work the gangs should run level and cut at an even depth. Adjust the front harrow gangs to suit by shortening or lengthening the front gang support rod. This adjustment is obtained by removing pin at "B" *(Illust. 3)*, loosening lock nut at "C" *(Illust. 3)*, and turning front gang adjusting rod bracket at "D". To raise outer end of front gang, shorten front gang support rod; to lower outer end of front gang, lengthen front gang support rod. When the desired leveling is obtained replace pin and tighten lock nut.

If the harrow ridges the soil between the rear gangs, the soil may be leveled by removing bolt at "E" *(Illust. 3)* and moving the gangs out to the end hole in the rear gang swivel plate. If the harrow does not fill the center depression left by the front harrow, move gangs to inner hole of rear gang swivel plate.

The degree of angle of the rear gangs can be adjusted to meet varying soil conditions by means of the selection of holes at "F" in rear gang set bars. *See Illust. 3.*

For best results, keep the harrow in a level working position. This is obtained by raising or lowering the clevis in hitch plate "G". *See Illust. 3.*

FULL BLADE SCRAPERS



Illust. 4

Adjust the scraper blades by means of the bolts and slotted holes at "H", so they just clear the disks when at the center. *See Illust. 4.*

INSTRUCTIONS FOR SETTING UP

(Adjusting and Operating Instructions are on page 3)

move all wires and arrange parts conveniently.

ibricate all moving parts as you proceed and see that they work free-

lts must be used in the holes in which they are found, or in parts to
they are attached, unless otherwise shown.

aded portions in illustrations show parts to be assembled; these must
aced on the machine in the order numbered.

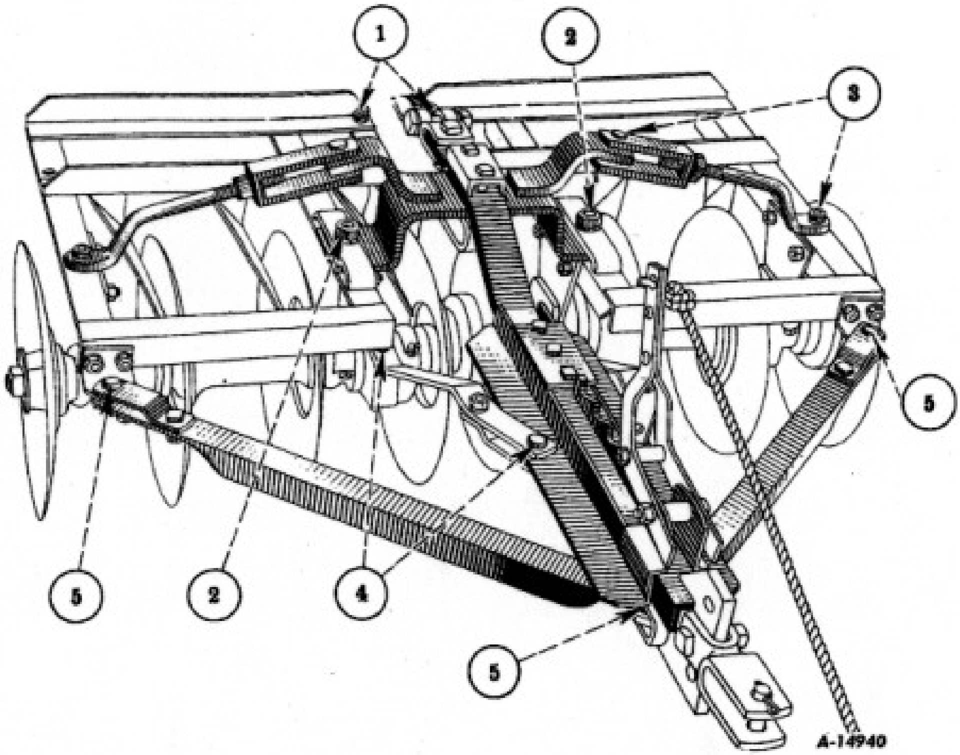
erever the terms "Right" and "Left" are used, it should be understood
an from a position behind and facing the machine.

reserve the right to make changes or improvements in the design or
ruction of any part without incurring the obligation to install such
es on any machine previously delivered.

IFICATIONS

Size	No. of Disks	Size of Disks
4-ft.	16	14" or 16"

FRONT HARROW



Illust. 5

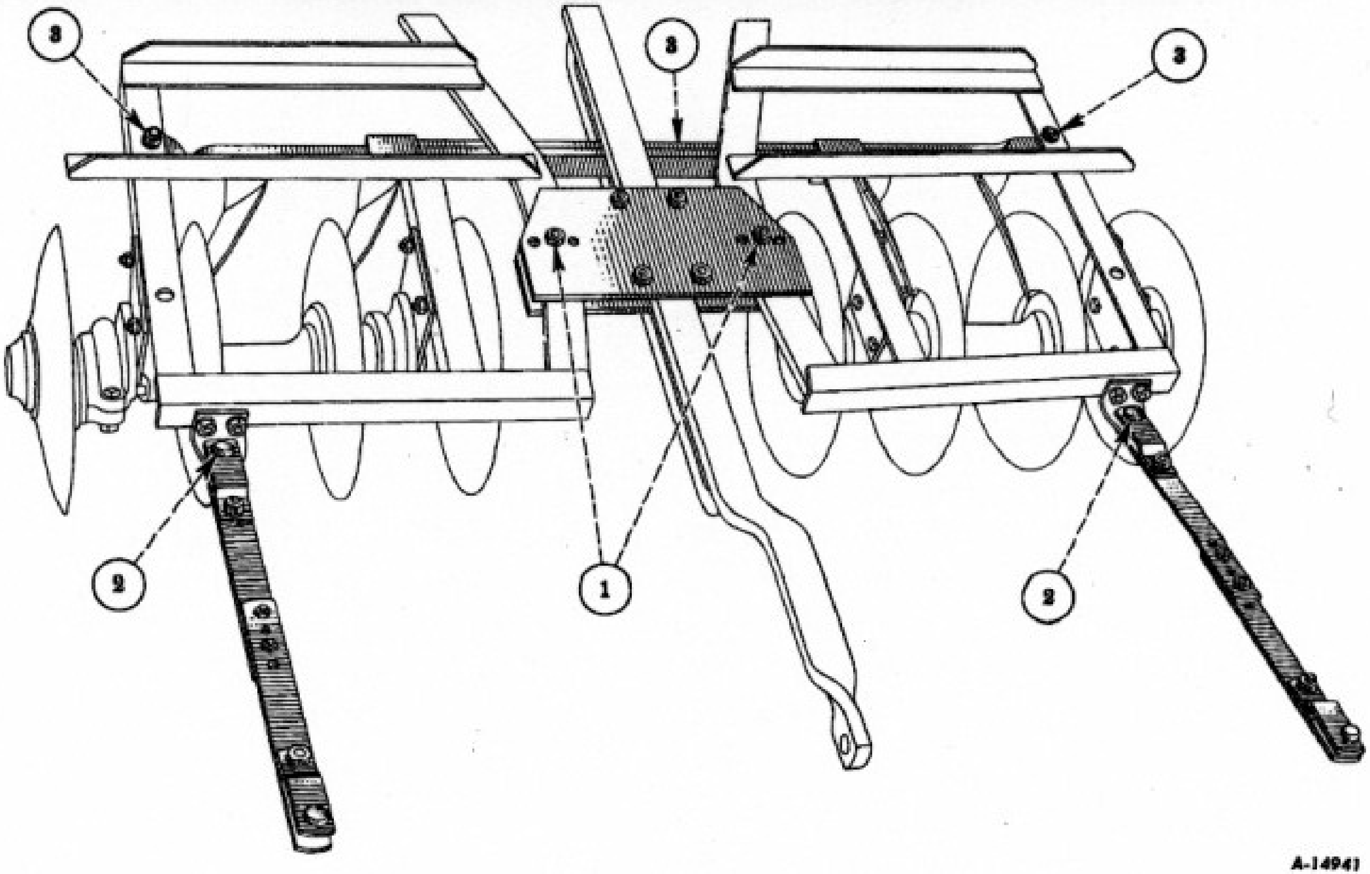
1. Place the gangs in relative positions. Remove the bolts at "1" and swing the rear gang pivot arms into positions. Replace the bolts and tighten the nuts and lock washers.

2. Attach the tongue to the gangs with the bolts located in the gang covers.

3. Attach the front gang support rods to the frame with the bolts located in the gang covers and the pins located in the tongue assembly.

4. Secure the front gang swivel braces to the bearings and draft angles with the bolts and pins provided. Tighten the bolts securely and spread the cotters.

5. Attach the drawbar angle braces as illustrated.



Illust. 6

REAR HARROW - Continued

See Illust. 6.

1. Attach the rear gang swivel plate to the rear gang covers using the center holes in plate. Tighten the bolts securely.

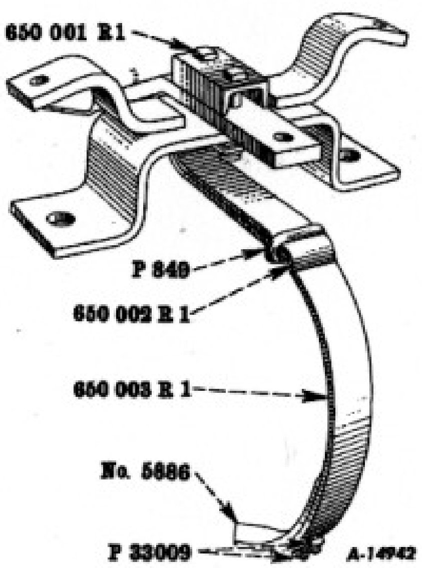
2. Secure the rear gang set bars to the rear gang covers with the pins provided. Spread both cotters.

3. Slip the rear gang leveling bar between the guide and the rear drawbar extension. Bolt the leveling bar to the outer ends of the rear gang covers. NOTE: Make certain that the leveling bar slides freely before attaching.

CENTER TOOTH ATTACHMENT (Special)
(For Front Harrow only)

Bolt the Center Tooth Attachment securely to the front gang swivel bracket and front drawbar extension, as illustrated.

NOTE: For harrows equipped with 14" disk blades, the center tooth spacer (650 001 R1) is bolted on top of the front drawbar extension, as illustrated. For 16" disk blades, spacer (650 001 R1) is turned over and bolted to the underside of the front gang swivel bracket.



Illust. 7

Farm Accidents can be prevented with your help

No accident-prevention program can be successful without the whole-hearted co-operation of the person who is directly responsible for the operation of equipment.

To read accident reports from all over the country is to be convinced that a large number of accidents can be prevented only by the operator anticipating the result before the accident is caused and doing something about it. No power-driven equipment, whether it be transportation or processing, whether it be on the highway, in the harvest field or in the industrial plant, can be safer than the man who is at the controls. If farm accidents are to be prevented—and they can be prevented—it will be done by the operators who accept a full measure of their responsibility.

It is true that the designer, the manufacturer, the safety engineer can help; and they will help, but their combined efforts can be wiped out by a single careless act of the operator.

It is said that ***"the best kind of a safety device is a careful operator."*** We ask you to be that kind of an operator.

PARTS LIST AND ILLUSTRATIONS

The following pages contain parts list and illustrations of "exploded" views of the various units disassembled so that parts wanted may be readily located. Reference numbers only are shown in the illustrations and, to avoid errors and delays, when ordering parts always use the regular "Part Number" shown with the "Ref. No." Do not use reference numbers when ordering parts.

Unnumbered parts in the illustrations are the same as corresponding parts shown with numbers.

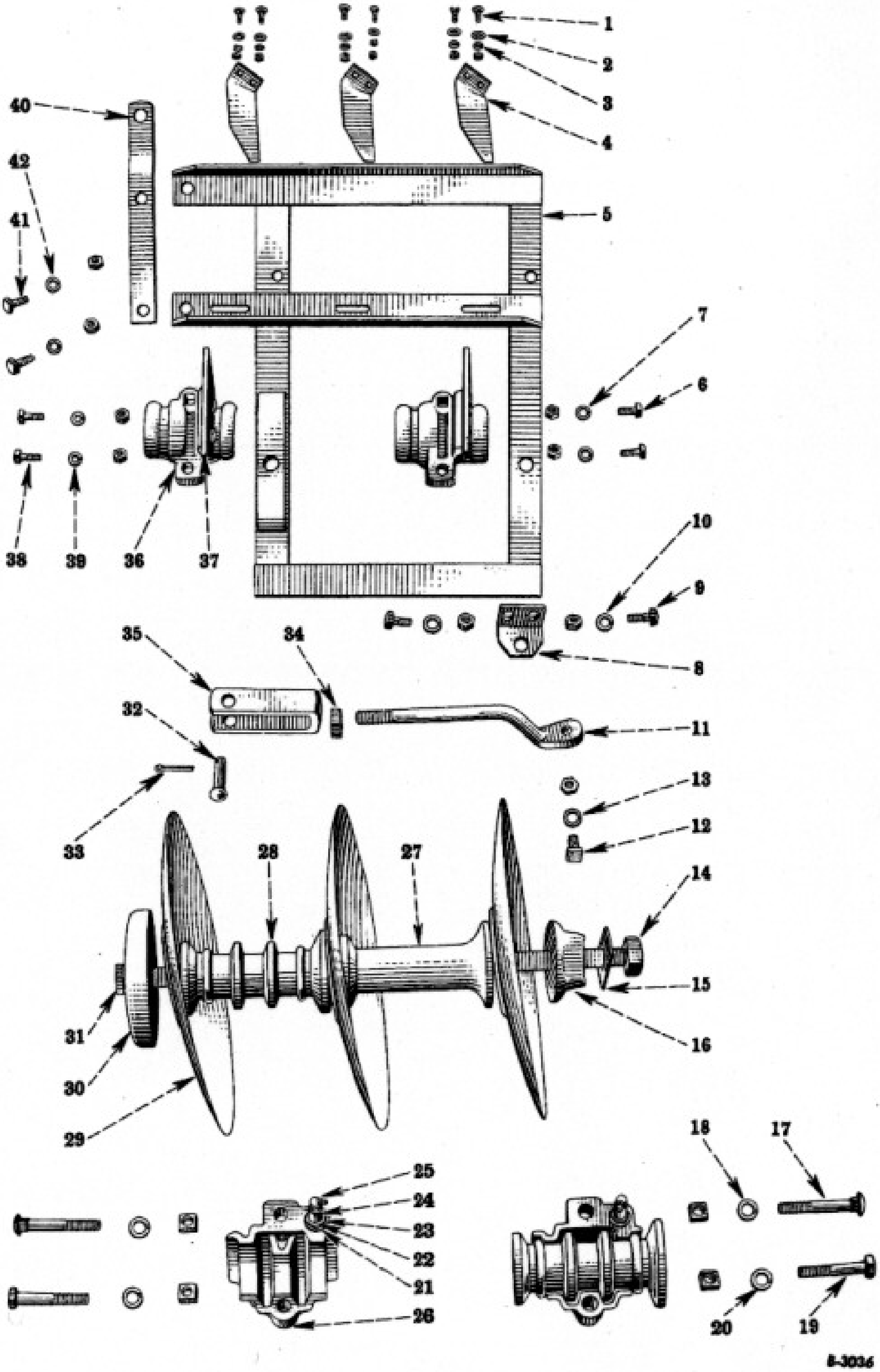
Don't order parts from the illustrations only; refer to the list also.

Bolts with part numbers ending in R11 are supplied with one square nut.

INDEX TO UNITS

Numerical Index to Part Numbers will be found on page 20.

FRONT HARROW GANG COVER AND DISKS



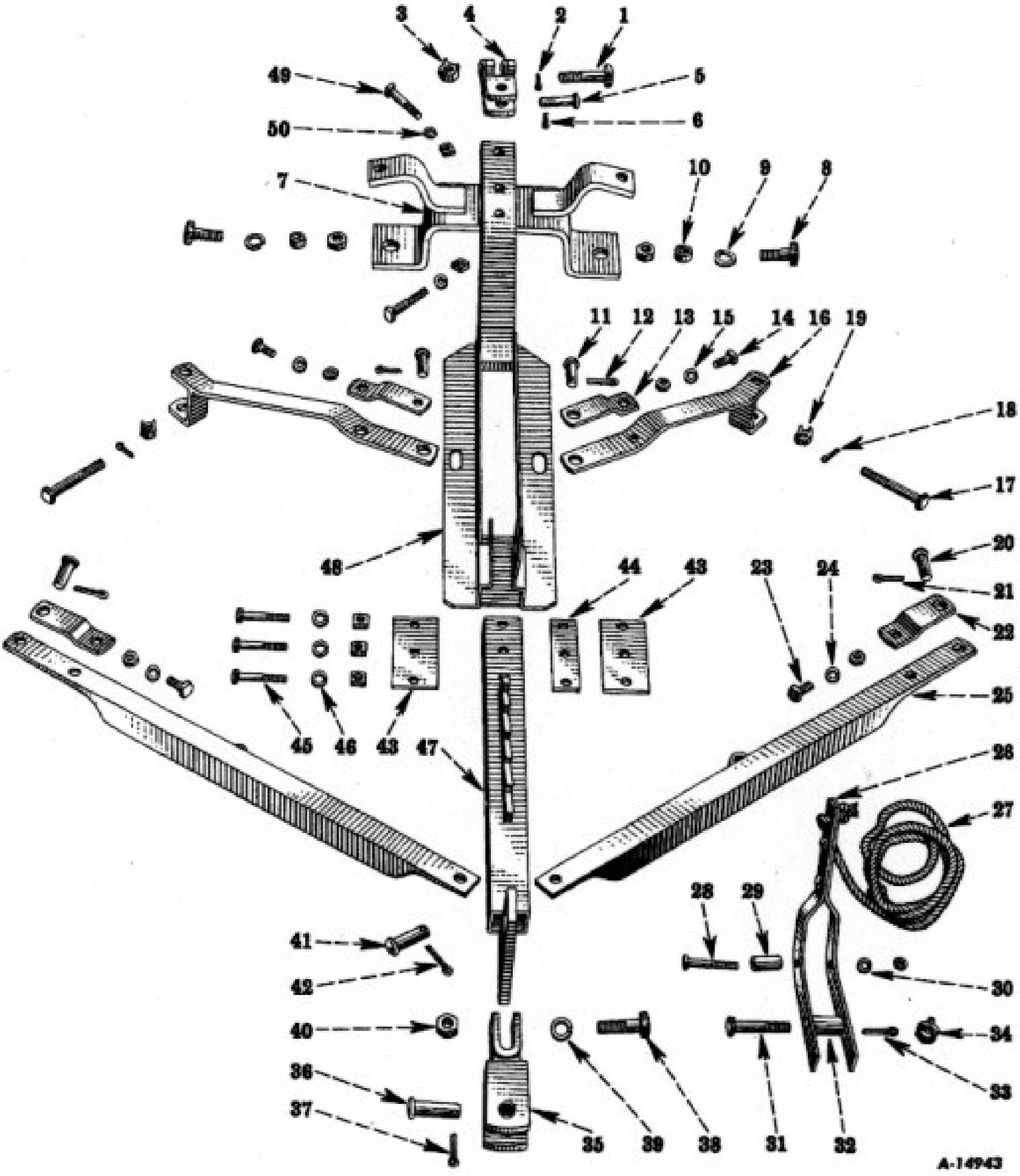
FRONT HARROW GANG COVER AND DISKS - Continued

Index to Reference Numbers shown in illustration on opposite page.

Ref. No.	Part Number	Description
1	14 990 R11	Carriage bolt, 5/16 x 5/8".
2	103 340	Plain washer.
3	103 320	Lock washer.
4	495 868 R1	Scraper (front gang, left; rear gang, right).
	495 869 R1	Scraper (front gang, right; rear gang, left).
5	495 831 R92	Front gang cover, left.
	495 832 R92	Front gang cover, right.
6	13 256 R11	Machine bolt, 7/16 x 1".
7	103 322	Lock washer.
8	495 818 R2	Gang swivel bracket.
9	13 257 R11	Machine bolt, 1/2 x 1".
10	103 323	Lock washer.
11	495 830 R1	Gang frame support rod.
12	13 281 R11	Machine bolt, 1/2 x 1-3/8".
13	103 323	Lock washer.
14	105 612	Square nut, 7/8".
15	P 34100	Arbor bolt nut lock.
16	P 4166	Washer for arbor bolt nut.
17	15 174 R11	Carriage bolt, 1/2 x 3-1/2".
18	103 323	Lock washer.
19	13 416 R11	Machine bolts, 1/2 x 3".
20	103 323	Lock washer.
21	105 411	Pipe cap, 1/4".
22	PA 13345	Oil pipe lock nut.
23	P 13428	Leather washer, 9/16 x 1 x 1/8".
24	P 34685	Oil pipe, 1/4 x 2-3/4".

Ref. No.	Part Number	Description
25	109 353	Lubrication fitt 1/8", 30° elbo
26	PA 4149	Lower bearing (f gang, right; rear gang, lef
	PA 4150	Lower bearing (f gang, left; rear gang, rig
27	PA 821	Spacing spool.
28	P 4128	Bearing spool.
29	P 24903	Solid disk, 14".
	P 34073	Solid disk, 16".
30	P 4160	Washer for arbor bolt head (fro gang).
	P 4162	Washer for arbor bolt head (rea gang).
31	495 867 R1	Arbor bolt, 7/8 23-1/4".
32	6 642	Pin, 5/8 x 2-1/4 (drilled).
33	108 635	Cotter, 1/8 x 1-1/8".
34	105 611	Square nut, 3/4" Type "A".
35	495 828 R93	Gang support rod clevis assembl
36	PB 4124	Upper bearing (f gang, left; re gang, right).
	PB 4125	Upper bearing (f gang, right; r gang, left).
37	495 866 R1	Bearing standard
38	13 256 R11	Machine bolt, 7/16 x 1".
39	103 322	Lock washer.
40	495 859 R2	Rear gang pivot
41	13 272 R11	Machine bolt, 1/ x 1-1/4".
42	103 323	Lock washer.

SLIDING TONGUE AND DRAFT ANGLES

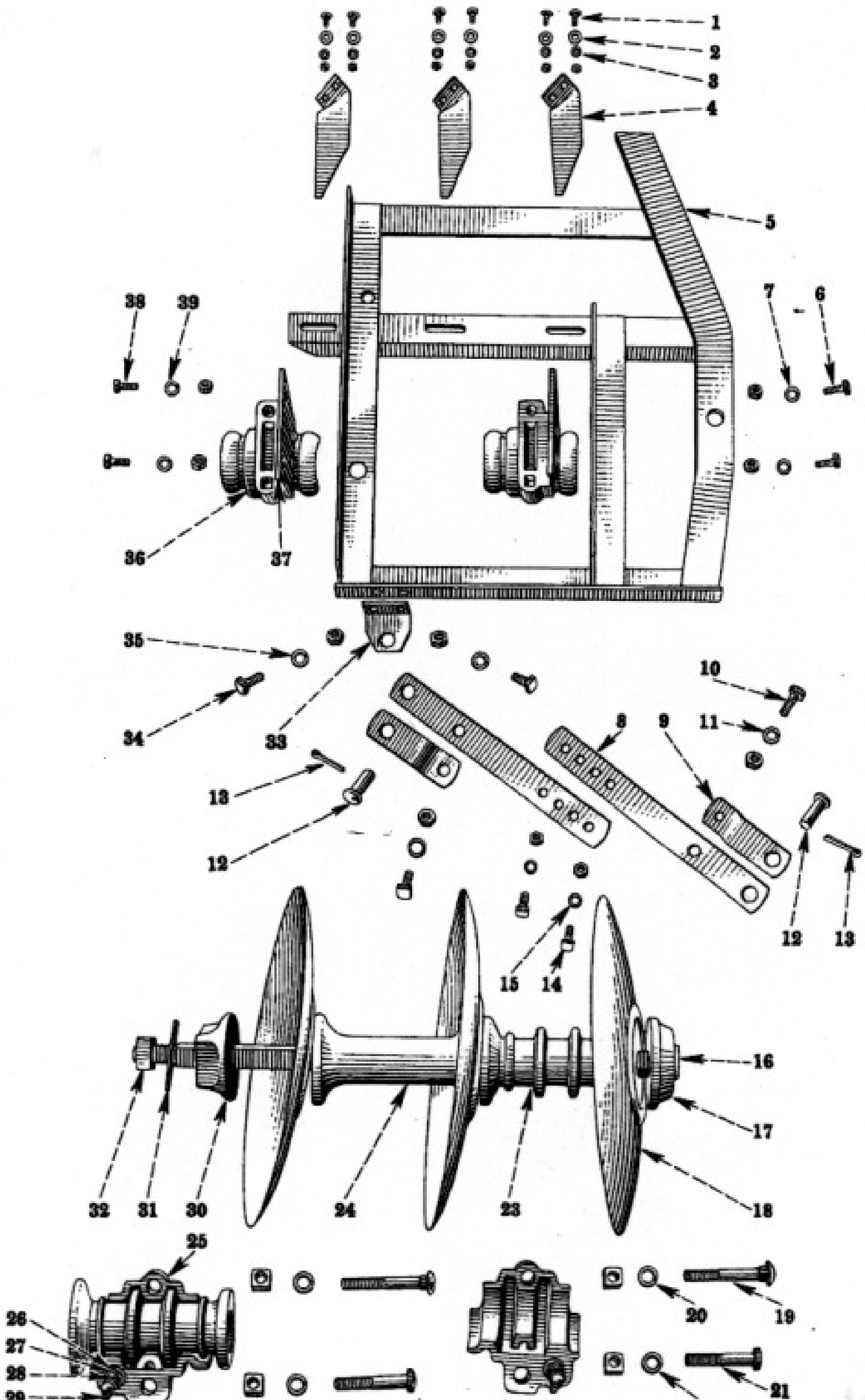


SLIDING TONGUE AND DRAFT ANGLES - Continued

Index to Reference Numbers shown in illustration on opposite page

Ref. No.	Part Number	Description
1	16 033 R11	Machine bolt, 3/4 x 3".
2	108 641	Cotter, 1/8 x 1-3/8".
3	L 263	Horned nut.
4	495 853 R1	Drawbar extension clevis.
5	H 2808	Pin, 5/8 x 2" (drilled).
6	108 635	Cotter, 1/8 x 1-1/8".
7	495 824 R1	Front gang swivel and rod bracket.
8	13 341 R11	Machine bolt, 3/4 x 2".
9	103 326	Lock washer.
10	495 827 R1	Spacer.
11	Q 995	Pin, 5/8 x 1-3/8" (drilled).
12	108 635	Cotter, 1/8 x 1-1/8".
13	495 817 R2	Gang swivel clevis.
14	13 264 R11	Machine bolt, 1/2 x 1-1/8".
15	103 323	Lock washer.
16	495 819 R92	Front gang swivel brace, left.
	495 820 R92	Front gang swivel brace, right.
17	12 638 R1	Machine bolt, 1/2 x 3-3/4" (drilled).
18	103 374	Cotter, 3/32 x 1".
19	L 64	Horned nut.
20	Q 995	Pin, 5/8 x 1-3/8" (drilled).
21	108 635	Cotter, 1/8 x 1-1/8".
22	495 817 R2	Gang swivel clevis.
23	13 272 R11	Machine bolt, 1/2 x 1-1/4".
24	103 323	Lock washer.
25	495 815 R2	Drawbar angle b left.
	495 816 R2	Drawbar angle b right.
26	495 810 R91	Adjuster bar le
27	P 13200	Gang adjusting releasing rop
28	13 357 R11	Machine bolt, 3 x 2-1/4".
29	495 813 R1	Adjusting lever stop roller.
30	103 321	Lock washer.
31	13 384 R1	Machine bolt, 1 2-1/2" (drill
32	495 814 R1	Spacer.
33	103 374	Cotter, 3/32 x
34	L 64	Horned nut.
35	495 807 R91	Hitch clevis.
36	Q 1394	Pin, 3/4 x 2-3/ (drilled).
37	103 421	Cotter, 1/4 x 1-
38	13 361 R1	Machine bolt, 5/ 2-1/4".
39	103 325	Lock washer.
40	114 820	Hex. nut.
41	6 642	Pin, 5/8 x 2-1/ (drilled).
42	108 635	Cotter, 1/8 x 1-1/8".
43	495 806 R1	Tongue plate (t and bottom).
44	P 24851	Sliding tongue shim.
45	13 377 R11	Machine bolt, 7/ x 2-1/2".
46	103 322	Lock washer.
47	495 801 R92	Tongue.
48	495 870 R92	Draft angle.
49	13 305 R11	Machine bolt, 1/ x 1-5/8".
50	103 323	Lock washer.

REAR HARROW GANG COVER AND DISKS

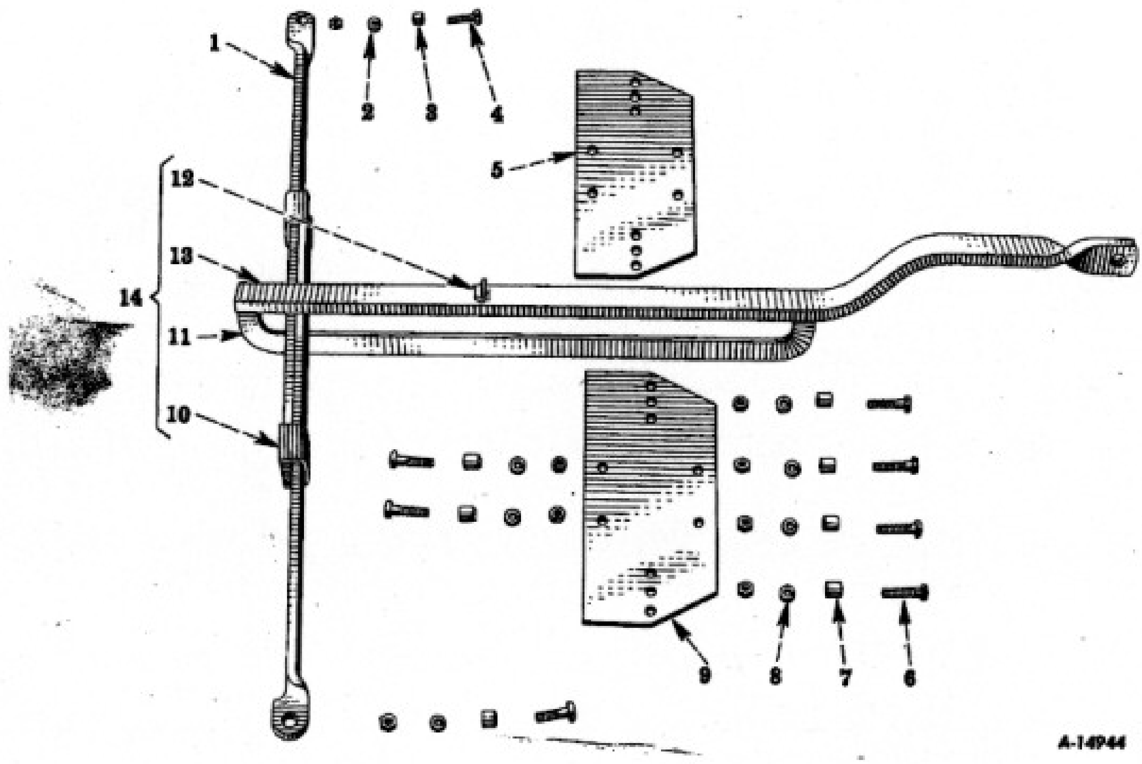


REAR HARROW GANG COVER AND DISKS - Continued

Index to Reference Numbers shown in Illustration on opposite pag

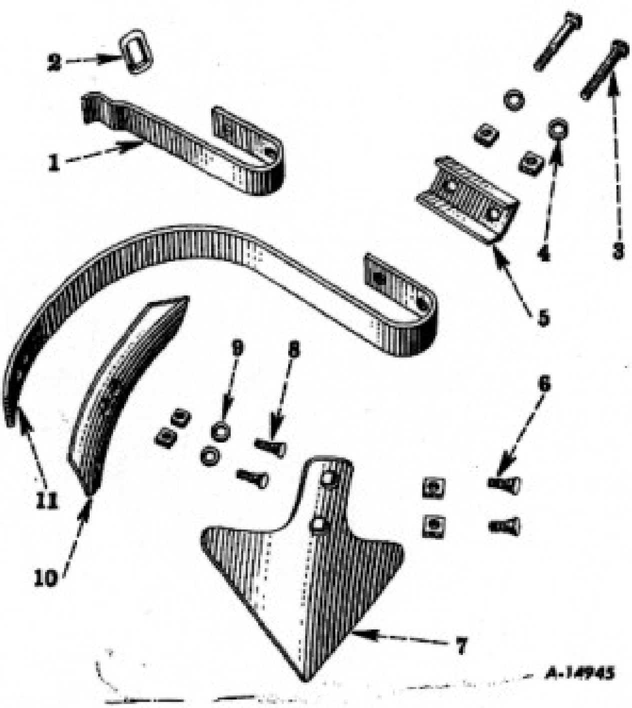
Ref. No.	Part Number	Description
1	14 990 R11	Carriage bolt, 5/16 x 5/8".
2	103 340	Plain washer.
3	103 320	Lock washer.
4	495 868 R1	Scraper (front gang, left; rear gang, right).
	495 869 R1	Scraper (front gang, right; rear gang, left).
5	495 842 R93	Rear gang cover, left.
	495 843 R93	Rear gang cover, right.
6	13 256 R11	Machine bolt, 7/16 x 1".
7	103 322	Lock washer.
8	495 860 R2	Rear gang set bar.
9	495 817 R2	Gang swivel clevis.
10	13 264 R11	Machine bolt, 1/2 x 1-1/8".
11	103 323	Lock washer.
12	Q 995	Pin, 5/8 x 1-3/8" (drilled).
13	108 635	Cotter, 1/8 x 1-1/8".
14	13 255 R11	Machine bolt, 3/8 x 1".
15	103 321	Lock washer.
16	495 867 R1	Arbor bolt, 7/8 x 23-1/4".
17	P 4162	Washer for arbor bolt head.
18	P 24903	Solid disk, 14".
	P 34073	Solid disk, 16".
19	15 174 R11	Carriage bolt, 1/2 x 3-1/2".
20	103 323	Lock washer.
21	13 416 R11	Machine bolt, 1/2 x 3"
22	103 323	Lock washer.
23	P 4128	Bearing spool
24	PA 821	Spacing spool
25	PA 4149	Lower bearing gang, right gang, left)
	PA 4150	Lower bearing gang, left; gang, right
26	105 411	Pipe cap, 1/4
27	PA 13345	Oil pipe lock
	P 13428	Leather washe 9/16 x 1 x
28	P 34685	Oil pipe, 1/4 2-3/4".
29	109 353	Lubrication f 1/8", 30° e
30	P 4166	Washer for ar bolt nut.
31	P 34100	Arbor bolt nu
32	105 612	Square nut, 7/
33	495 818 R2	Gang swivel b
34	13 257 R11	Machine bolt, x 1".
35	103 323	Lock washer.
36	PB 4124	Upper bearing gang, left; gang, right
	PB 4125	Upper bearing gang, right; gang, left).
37	495 866 R1	Bearing stand
38	13 256 R11	Machine bolt, 7/16 x 1".
39	103 322	Lock washer.

DRAW BAR EXTENSION, REAR, AND LEVELING BAR



Ref. No.	Part Number	Description	Ref. No.	Part Number	Description
1	495 862 R2	Leveling bar.	8	103 323	Lock washer.
2	103 323	Lock washer.	9	495 858 R1	Rear gang swivel plate, upper.
3	495 864 R1	Spacer.	10	495 863 R3	Leveling bar guide.
4	13 293 R11	Machine bolt, 1/2 x 1-1/2".	11	495 856 R2	Leveling bar runner.
5	495 858 R1	Rear gang swivel plate, lower.	12	495 857 R2	Drawbar extension stop.
6	13 338 R11	Machine bolt, 1/2 x 2".	13	495 855 R4	Drawbar extension, rear.
7	495 852 R1	Spacer.	14	495 854 R94	Drawbar extension.

CENTER TOOTH ATTACHMENT FOR FRONT HARROW (Special)



Ref. No.	Part Number	Description	Ref. No.	Part Number	Description
1	650 002 R1	Center tooth reinforcement.	6	15 552 R11	No. 3 plow bolt 7/16 x 1".
2	P 849	Keeper for reinforcement.	7	F 14281	Center tooth shovel (speci
3	13 416 R11	Machine bolt, 1/2 x 3".	8	P 33009	No. 3 plow bolt 3/8 x 1".
4	103 323	Lock washer.	9	103 321	Lock washer.
5	650 001 R1	Center tooth spacer.	10	5 886	Center tooth po
			11	650 003 R1	Center tooth.

NUMERICAL INDEX